The state of the s

FRIDMAN, Rudolif Arkadiyevich; MAKSIMOVICH, A.G., red.; MEDRISH, D.M., tekhn.red.

[Perfumes and cosmetics; a manual for salesmen] Parfiumerno-

[Perfumes and cosmetics; a manual for salesmen] Parfiumerno-kosmeticheskie tovary; v pomoshch' prodavtsu. Moskva, Gos. izd-vo torg. lit-ry, 1957. 49 p. (MIRA 11:5) (Cosmetics) (Perfumes)

FRIIMAN. Rudol'f Arkad'yevich; DAYEV. N.A., retsenzent; KIPORENKO,
S.V., retsenzent; KALKNOVA, K.I., spetsred.; KALMENS, R.I.,
red.; SOKOLOVA, I.A., tekhn.red.

[Toiletries; manufacture, use, and analysis] Kosmatika;
proizvodstvo, primenenie, analiz. Izd.2., perer. i dop.
Moskva, Pishchepromizdat, 1959. 412 p. (MIRA 12:4)

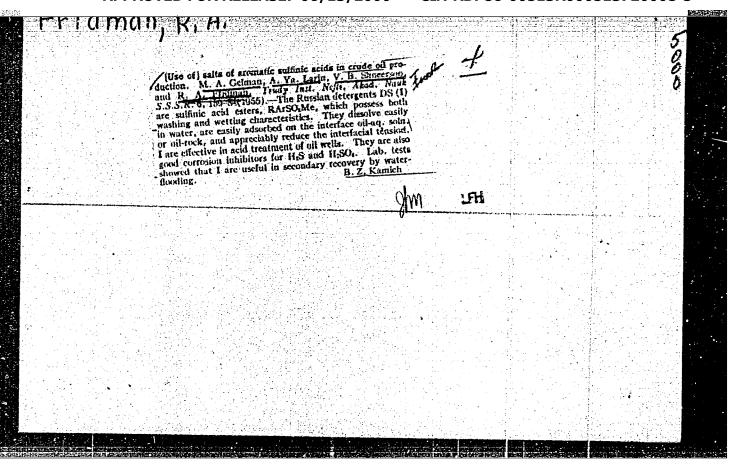
(Toilet preparations)

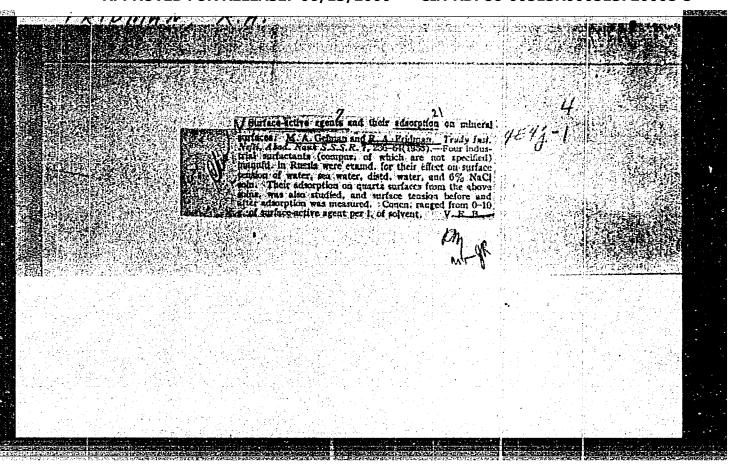
FRIDMAN, Rudol'f Arkad'yevich; BORISOVA, G.A., red.; MEDRISH, D.M., tekhn. red.

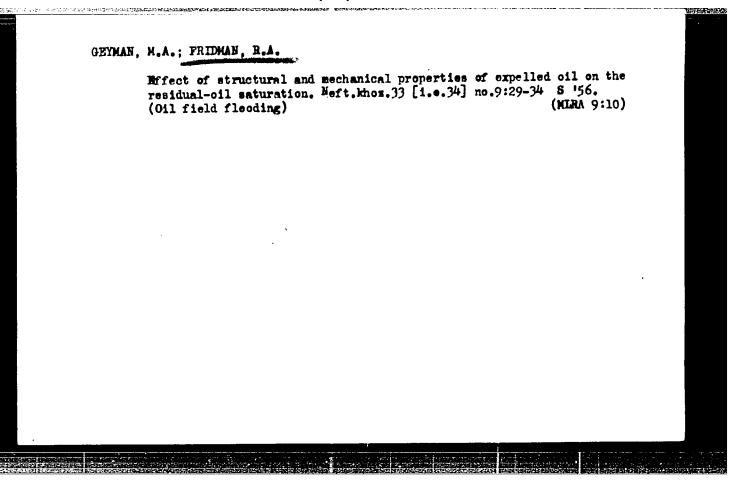
[Consumers' information about perfumery and cosmetics] Pokupateliu o parfiumerii i kosmetike. Leningrad, Costorgizdat, 1961. 191 p.

(MIRA 14:8)

(Beauty culture) (Perfumes)







GETMAN, M.A.; KHANMURZIN, I.I.; FRIDMAN, R.A.

Controlling structural and mechanical properties of drilling muds.

Azerb. neft. khoz. 37 no.2:16-21 F '58. (MIRA 11:6)

(Oll well drilling fluids)

FRIDMAN, R. A.

with M. A. Geyman "Dislodging the Romashkino Field Petroleum From Loose Sands Carried Out at a Low Temperature"

Transactions of the Petroleum Institute, Acad. Sci. USSR, v. 11, 011 Field Industry, Moscow, Izd vo AN SSSR, 1958. 346pp.

CEYMAN, M.A.; FRIDMAN, R.A.

Fleeding the Romashkino oil from unconsolidated sands at low temperatures. Trudy Inst.nefti 11:193-208 '58. (MIRA 11:12) (Oil field flooding)

PAIRMI, A. H.

"Monsettling Filtration of Coagulated Water in Pressure Filters With Granular Mixtures" Cand Tech Sci, Chair of Water Supply, Lemingral Construction Engineering Inst, Tin Higher Education, Lemingrad, 1 54. (KL, No. 2, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational SO: Sem. No  $5(8,\ 27\ \rm{Jul}\ 35)$ 

The technology of the manufacture of articles from zinc-sulfide glass. Stek. i ker. 19 no.8:39-40 Ag '62. (MIRA 15:9)

1. Stekol'nyy zavod "Krasnyy May".

(Zinc sulfide) (Glass)

	SOURCE CODE: UR/			/0061
INVENTOR: Mazo, E. E.; Iodo, S. S.; Yakis  ORG: none	,	•	3	3
TITIE: Opalescent glass containing no les SOURCE: Izobreteniya, promyshlennyye obra TOPIC TAGS: opalescent glass, illumination	ztuy, tovarnyye engineering,gl	znaki, no. 1	Horing of	Rass .
ABSTRACT: An Author Certificate has been lead with high illumination engineering proceedings of SiO <sub>2</sub> , 60.3%; Al <sub>2</sub> O <sub>3</sub> , 8.5%; Ca ZrO <sub>2</sub> , 2.5%; cryolite, 6%.	issued for opale	escent glass	containi	ng no
SUB CODE: 11/ SUBM DATE: 260ct61		·		
Card 1/1 vmb	oc: 666,22 ;	666.263		
santus en santus su s				

FRIDMAN, R.N.RUBINA, S.L.

1150211

Postvaccinial allergy to RCG. vaccine of various concentration. Probl. tuberk., Moskva no.4:63 July-Aug. 1950. (CIML 20:1)

1. Of Voronesh Institute of Epidemiology and Microbiology (Director -- V. M. Kruglikov; Scientific Director -- Docent M. V. Zemskov) and of the Oblast Tuberculosis Dispensary (Head Physician N. S. Pokhvistnev; Scientific Director -- Prof. L. D. Shteynberg).

FRIding & STREET WAI I ENGLI	1 PMC EMPLIATION  Manitality productation  Milland Man Productation  Marker, 1991. 20 p. Erra  Formation.  Can in interfat for the  submation of machine-root  at workers of the Perma di  to forth in the Seven Fat  for forth workers of the Seven Fat  for forth in the Seven Fat  for forth workers of the Seven Fat  for			MEGASTRIBEST FROCEST PRINCIPAL  Tobastrial, V.J. [Exploser]. However, Gontrol of Maral-Carring Machine  Tools  Mediated and (Trainlate of Terminal Sciences). Pre-machinelise and  The Automatic of Machine Tools in Desirial, Production  The Automatic of Machine Tools in Desirial, Production  Tools of Machine Tools in Desirial of Machine Machinelism  Tools of Machinelism and Automatic of Machine Machinelism and Machinelism  Tools of Machinelism and Machinelism			
	Emplehency setheristics (Overall binary) Possettan sorations (Overall binary From Experience of Paragras Dain to Fro [Fasts) Paragras of Paragras (Edup.) 2.7 2,000 expens printed.  Mair V. Tann'ern; Pett. Mair Te. Vermions.	PURDOZ: The collection of arti- sted in the securification and COUNTRY The offers of industry mead of the the objectives as in these ill settles. The new section that is not instrument a section. Then are no refer while OF COUNTRY.	Tehrerinis, V.S. [Engled Youls Economy A.E. [Sentens Use Automatics of Manine	French P. (Parsee)   Farsee	Tables, set 12. Boltha, Philopola, Continue of C. Tables, San Processes, San Private, San Processes, San Private, San Priv	Cart 3/3	
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PANIKAROVSKAYA, G.V., FRIDMAN, R.O.

Clinical significance of a new method for diagnosing Botkin's disease in children [with summary in English]. Pediatriia 36 no.4:29-33 Ap'58 (MIRA 11:5)

1. Iz kafedry pediatrii (zav. - prof. R.Yu. Kol'ner) lechebnogo fakul'teta Kiyevskogo meditsinskogo instituta (dir. - dotsent I.N. Alekseyenko) na baze 2-y detskoy infektsionnoy bol'nitsy (glavnyy vrach A.A. Rudik).

(HEPATITIS, INFECTIOUS)

Chemical reactions in spectrum analysis. 1zv. vys. ucheb. zav.; fiz no.6:176-177 161. (MIRA 15:1)

1. Irkutskiy gosudarstvonnyy universitot imeni Zhdanova. (Chemical reactions) (Spectrum analysis)

POROZHENKO, B.L.; FRIDMAN, R.S., red.; KOGAN, V.V., tekhn. red.

CHICAGO BERGO CHECH CONTROL CO

[Handbook on nonferrous and rare metals and their compounds used in laboratory practice; main indices of the quality of specimens] Spravochnik po tsvetnym i redkim metallam i ikh soedineniiam, primeniaemym v laboratornoi praktike; osnovnye pokazateli kachestva preparatov. Sost. B.L. Porozhenko. Moskva, Goskhimizdat, 1962. 627 p. (MIRA 16:1) (Nonferrous metals—Handbooks, manuals, etc.)

KORENMAN, Izrail' Mironovich; FRIDMAN, R.S., red.; PANTELEYEVA, L.A., tekhn. red.

[Introduction to quantitative ultramicroanalysis] Vvedenie v kolichestvennyi ul'tramikroanaliz. Moskva, Goskhimizdat, 1963. 191 p. (MIRA 17:2)

j. Je	Double capacity sieve middling purifier. Muk, elev. prom. 23 no.12: 17-18 D '57. (MIRA 11:2)					
er i ett e	1. Tekhnicheskiy otdel Ministerstva khleboproduktov SSER (for Bershak). 2. Noskovskiy mel'nikchnyy kombinat No.3. (for Kudryavtsev, Fridman). (Sieves)					
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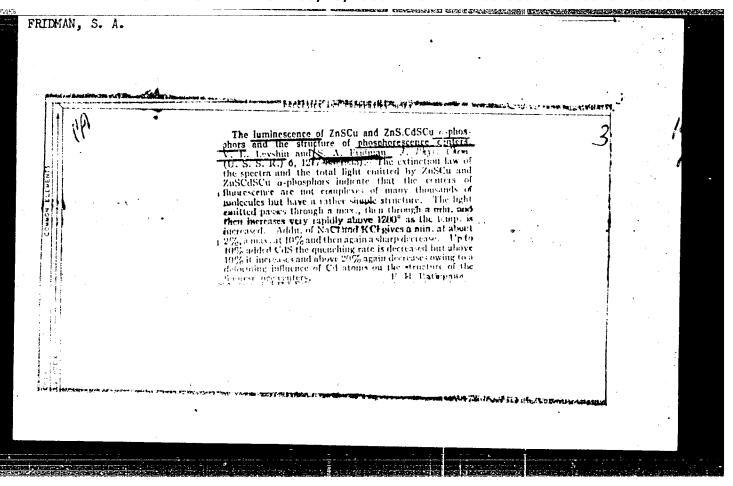
EAUXH, V.; FRIDMAN, S., insh.

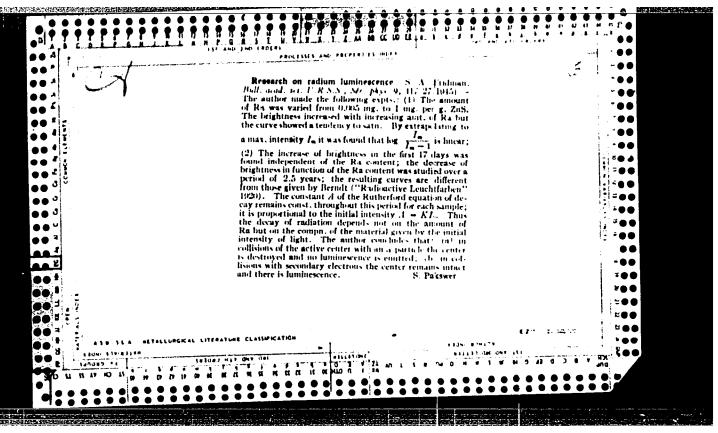
Using reedwork construction elements. Sil'. bud. 9 no.2:4-5 F '59.

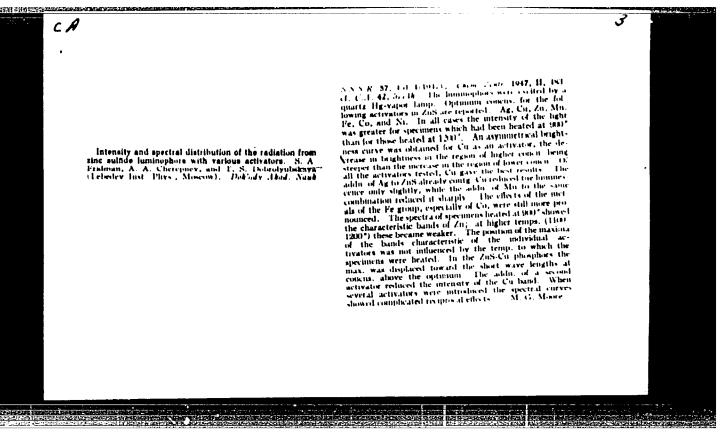
(MIRA 12:6)

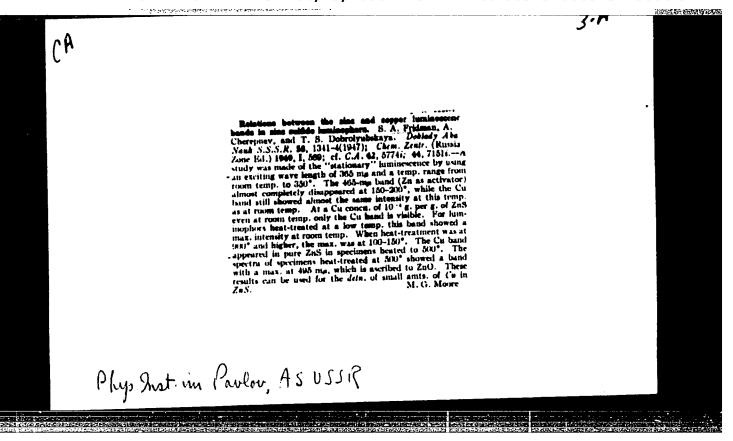
1.Nachal'nik seveta Shiryayevskey mezhdukelkhezney: streitel'noy erganizatsil Odesskey eblasti (for Baukh).

(Ukraine-Reed (Betany)) (Farm buildings)







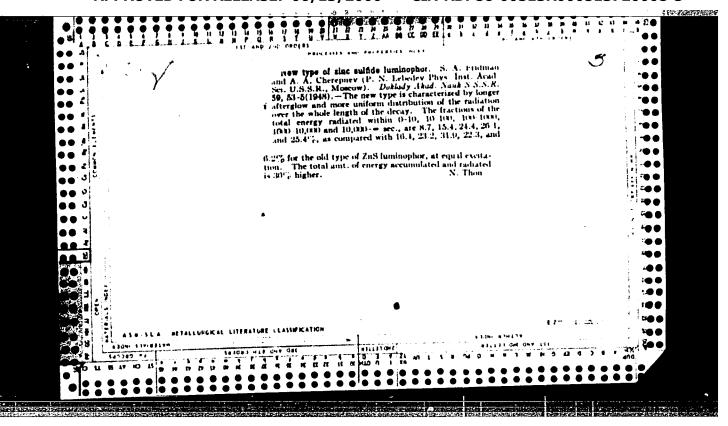


CHECHIK, N.O. and FRIDMAN, S.A.

"Photoelectric Photometry of Temporarily Luminous Bod ies"

Zhur Teck Fiz., 1948, V 18, No. 1 p. 35.

Inst. of Automatics and Telemechanics, AS USSR (for Chechik) and Physics Inst. im. Leb edev AS USSR.



VAVILOV, V.S.; VUL, B.M.; GALKIN, G.N.; FRIDMAN, S.A.

Performance of "atomic" sources of current with double transfor-

mation of energy. Fiz.tver.tela 1 no.5:826-827 My '59. (MIRA 12:4)

1. Fizicheskiy institut im. P.N. Lebedeva. (Semiconductors)

\$/048/59/023/011/008/012 B006/B056

24.3500 (1035,1138,1160)

AUTHORS:

Vasil'yeva, Ye. G., Fridman, S. A.

TITLE:

Experience Concerning the Use of Thermography for the

Investigation of Zinc Sulfide

PERIODICAL:

Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959,

Vol. 23, No. 11, pp. 1347-1350

TEXT: The main task to be performed by the authors consisted in the physico-chemical investigation of luminophores on a zinc sulfide base by means of thermography (i.e. investigation of physico-chemical processes by means of the thermal effects accompanying them - heat emission and heat absorption). Thermography, which, itself, has a wide field of application, was used by Konstantinova-Shlezinger (Ref. 2) and her collaborators for the purpose of investigating luminophores. It has hitherto not been used for the investigation of zinc sulfide. The authors used ZnS from the "Krasnyy khimik" plant. Figs. 1 and 2 show the heating- and cooling curves of pure ZnS. The thermograms are characterized by five thermal effects: a negative one at 100, positive effects at 275 and 475, the sums of the Card 1/3

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Experience Concerning the Use of Thermography S/048/59/023/011/008/012 for the Investigation of Zinc Sulfide B006/B056

negative effects with minima at 600, 645, and 675°, and of the positive effects at 1050°. In order to be able to explain these thermal effects, ZnS samples were heated at the temperatures corresponding to these effects, after which they were investigated with respect to their X-rayas well as to their luminescence spectra. The latter were excited by means of 365 mμ. ZnS annealed at 450° shows yellow luminescence, at 650 yellow-green luminescence with a maximum at 510 mμ, without afterglow (Fig. 3). The results of the X-ray analysis are shown in a table. The lattice, which is cubically face-centered up to 580°, is found to vary with a further rise of temperature. Further, ZnS was heated with 5% NaCl, and the emission spectra were investigated. The annealing temperatures were adapted to the thermal effects; Fig. 5 shows the luminescence spectra of ZnS+NaCl at various annealing temperatures. At 560 and 580° a luminescence maximum occurred at 510 mm, and at 600° blue glow with a maximum at 478 m $\mu$  was observed. The brightness maximum of blue glow occurred at  $915^{\circ}$ , after which brightness again decreased. An X-ray analysis showed the occurrence of new bands at  $600-740^{\circ}$ . The authors investigated also the heating curves in H2S (Fig. 7); the test vessel is shown in Fig. 6. The results obtained permit the following interpretations of the thermal effects: 1) 50 - 100 - 190 - removal of moisture.

Experience Concerning the Use of Thermography S/048/59/023/011/008/012 for the Investigation of Zinc Sulfide B006/B056

2)  $190 - 275 - 380^{\circ}$ : crystallization following the dehydration effect. 3)  $415 - 475 - 520^{\circ}$  - exothermic oxidation effect:  $2 \text{ ZnS} + 30_2 = 2 \text{ZnO} + 2 \text{SO}_2 + 121 \text{ kcal}$ . 4)  $600 - 645 - 675^{\circ}$  transition to a new shape of the crystal lattice, and 5)  $1050^{\circ}$ : development of wurtzite structure. There are 7 figures, 1 table, and 3 references: 2 Soviet.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Institute of Physics imeni P. N. Lebedev of the Academy of Sciences, USSR)

Card 3/3

S/048/61/025/003/034/047 B104/B202

9.4160 (also 1137,1395)

AUTHORS: Levshin, V. L., Voronov, Yu. V., Rutan, V. B., Fridman, S.A.

and Shchayenko, V. V.

TITLE: Study of the effect of double activation with silver and

samarium on the localization levels and the emission of

zinc sulfide phosphors

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya,

v. 25, no. 3, 1961, 392-399

TEXT: This paper was presented at the 9th conference on luminescence (crystal phosphors), Kiyev, June 20 to 25, 1960. It is the first of a series planned by the authors in which they study the interaction between Ag and Sm activators in ZnS-Ag, Sm phosphor. When producing the specimens 4% magnesium chloride was partially added as flux. The quantitative inta given in the present paper were obtained from specimens to which fluxes had been added. The authors studied phosphors which had been activated only with silver or only with samarium and phosphors containing  $10^{-4} g/g$  Ag in which the samarium concentration was varied in the range  $10^{-7}$  to

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S/048/61/025/003/034/047 B104/B202

Study of the effect of double ...

 $10^{-3}$  g/g. Furthermore, they studied phosphors which contained  $10^{-4}$  g/g samarium and  $10^{-7}$  to  $10^{-3}$  g/g silver. Ag gives a band with  $\lambda_{\rm max} = 450$  T $\mu$ ,

Sm gives three bands which have line character and which lie in the green, orange, and red spectral range. The most intense group lies at 650 m $\mu$ . The type of luminescence centers could not be explained by comparing the line intensities as functions of the composition. It is possible that only one type of luminescence centers exists which in the respective states of excitation give different bands. Using the formula

$$E = \frac{kT_1T_2}{T_2-T_1} \left( ln \frac{\beta_2}{\beta_1} + 2ln \frac{T_1}{T_2} \right)$$
 (1)

suggested by I. A. Parfianovich, where  $\beta_1$  and  $\beta_2$  the different heating velocities on thermal deexcitation,  $T_1$  and  $T_2$  the corresponding absolute temperatures of the peaks of thermal deexcitation studied, and E the energy depth of the peak, the authors obtain the following values for the depth of the localization levels of samarium:

Card 2/1/

20845

Study of the effect of double...

S/048/61/025/003/034/047 B104/B202

t, °C -144 -90 -60 -10 +30 +70 +90 g, ev 0,26 0,37 0,43 0,53 0,61 0,69 0,73

The energy depth of silver levels is 0.33 ev. It may be concluded therefrom that new levels are formed due to the interaction of the activators and that this interaction reduces the light sum of the former levels. The increase of the number of activator ions which leads to a decrease of the light sum accumulated leads to the fact that traps which are produced by two neighboring activator ions are less efficient than those traps which are produced by an individual activator ion. Figs. 2 and 3 graphically represent the change of spectral composition of phosphor emission as depending on the ratio and the amount of the activators introduced. diagrams of Fig. 4 show the temperature effect on the activator interaction. From the results obtained the authors conclude a mutual extinction in both activators which becomes particularly manifest if the two activator concentrations strongly differ. The complex temperature dependence of extinction indicates the existence of different types of luminescence centers. In the following discussion V. Ya. Yaskolko speaks about experiments with CaSO phosphors activated with Mn, Sm, Pb, Zn, 31, and

4

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#### "APPROVED FOR RELEASE: 06/13/2000

#### CIA-RDP86-00513R000513720008-5

**20845** S/048/61/025/003/034/047 B104/B202

Study of the effect of double ...

Ce. He states that in some phosphors activated with two activators, bands of both activators can be observed. Z. A. Trapeznikova is mentioned in the present paper. There are 4 figures and 7 Soviet-bloc references.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute imeni P. N. Lebedev of the Academy of Sciences USSR)

V

Card 4/9/

CALIFICATION CONTRACTOR CONTRACTO

GEL'TS, V.E., inzh.; MOSKOVSKIY, A.P., otv. za vypusk; FRIDMAN, S.A., red.

[Plastic materials and ion exchange resins, their production and industrial applications; general concept of polymeric materials and their classification. Lequure No.1 (introduction)]Plasticheskie massy i ionoobmennye smoly, ikh proizvodstvo i primenenie v promyshlennosti; obshchee poniatie o polimernykh materialakh i ikh klassifikatsiia. Lektsiia No.1. (vvedenie). Kiev, 1962. 38 p. (MIRA 16:3) (Plastics) (Ion exchange resins) (Folymers)

L3499

s/051/62/013/006/019/027

E039/E120

14 2500

Fok, M.V., and Fridman, S.A.

AUTHORS: TITLE:

Relation between the rate of decay and the luminescence

yield under strong excitation

PERIODICAL: Optika i spektroskopiya, v.13, no.6, 1962, 869-871

The introduction of a quenching agent to accelerate the initial phosphorescent decay produces a reduction in the initial TEXT: intensity. Tests are made to determine a quantitative connection between the rate of decay and the luminescent yield. The initial decay is determined not by recombination but by the transition of electrons from deep traps. This reduction in intensity follows an exponential law:

 $I = I_0 e^{-\frac{\delta_1 W_{2T}^t}{\delta_1 + \delta_2}}$ (1)

where 61 and 62 are the probabilities of trapping electrons in deep and shallow traps. The luminescent yield  $\eta$  from a phosphor with two types of trap is given by:

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Relation between the rate of decay... \$\frac{\$5/051/62/013/006/019/027}{E039/E120}\$

where  $\beta$  and  $\beta_1$  are recombination coefficients of free electrons and holes;  $\delta$  is the probability of trapping free holes;  $W_1$ ,  $W_2$  and W are the probabilities of liberating electrons from deep and shallow traps, and holes from ionised luminescence centres. From this the following expression is derived:

$$\frac{\eta}{\eta_0 - \eta} = \left(\frac{\beta W_1 \delta}{\beta_1 W \delta_2} + \frac{W_1}{W_2}\right) \left(\frac{W_2 T^t n}{\log n} - 1\right)$$
(3)

where  $\eta_0$  is the value of  $\eta$  at  $\delta=0$ , i.e. without a quenching agent. This is verified experimentally using zinc sulphide and zinc cadmium sulphides. There are 2 figures.

SUBMITTED: June 4, 1962

Card 2/2

### "APPROVED FOR RELEASE: 06/13/2000 CIA-RI

CIA-RDP86-00513R000513720008-5

L 18748-63 EWP(q)/EWT(m)/EDS AFFTC/ASD JD/JG S/2941/63/001/000/0230/0239

AUTHORS: Levshin, V. L.; Voronov, Yu. V.; Cutan, V. B.; Fridman, S. A.; Shchayenko, V. Y.

TITLE: Radiation composition of luminescence centers in ZnS-Sm phosphors

SOURCE: Optika i spektroskopiya; sbornik statey. v. 1: Lyuminestsentsiya. Moscow, Izd-vo AN SSSR, 1963, 230-239

TOPIC TAGS: radiation, phosphor, activator, ion, spectra

ABSTRACT: The spectra of Sm<sup>3+</sup> in ZnS-Sm-phosphor without melt and with 4% MgCl<sub>2</sub> melt were analyzed to study the interaction between activator ions and the lattice and obtain information about radiation composition. The Sm concentration was varied between 10<sup>-7</sup> and 10<sup>-2</sup> gm/gm, and in addition a variable concentration of silver was added (10<sup>-6</sup> to 10<sup>-3</sup> gm/gm). Three types of luminescence centers were obtained, lying in the red, orange, and yellow-green parts of the spectra. These were enhanced by changing the phosphor composition. A temperature test from 20-120C indicated that several radiation bands were formed as a result of electronic and vibrational frequency combinations. Orig. art. has: 7 figures and 4 tables.

Card 1/2

. SION NR: AT4001250

5/2504/63/023/000/0064/01/2

Yu. V.; Voronova, I. G.; Gutan, V. B.; Lavlov, A. V.; Popov, Yu. V.; Voronova, I. Chikhacheva, V. A.; Shchavenko, V.

1 2. Study of cathode luminescence of zinc sulfide and stile?

AN SSSR. Fizicheskiy institut. Trudy\*, v. 23, 1963 64-

s. file shosphor, phosphorescence, photoluminescence, zinc sulfide, excitation energy, phosphor excitation

DESTRACT: This is a review article devoted to a theoretical and an perimental analysis of excitation energy losses in cathode luminestence, the approximate maximum cathode luminescence yield, exchange

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ACCESSION NR: AT4001250

of energy between an electron beam and a layer of luminor through which it passes, and also the evolution of individual glow processes as functions of the excitation density and the temperature. Particular attention is paid to an investigation of the persistence properties of ZnS phosphors and their connection with the location and filling of the electron and hole localization levels. A detailed analysis is made of the energy losses resulting from thermalization of the electrons and holes, and it is shown that in cathode luminessence these unavoidable losses are very large and decrease the glow efficiency by approximately 2.5 times. Allowing for other losses, the over-all glow efficiency in cathode luminescence cannot exceed 0.27--0.30. The study of the passage of an electron beam through sublimated layers of zinc-sulfide luminors has established the voluage dependence of the electron penetration depth and the energy losses at different depths of electron penetrations. The dependence of the spectral composition, brightness, and energy glow yield of. various zinc-sulfide and phosphate luminors on the current density,

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ACCESSION NR: AT4001250

voltage, and temperature were investigated. A glow efficiency of 0.256 was calculated for one type ZnS-Ag luminor. The attenuation of glow of different types of cathode luminors to 0.1, 0.01, and 0.001 of the initial brightness was investigated and the presence of two superimposed de-excitation processes of different durations is established. The causes of the reduction in the duration of afterglow with increasing excitation density are considered. The arrangement and development of localization level of the investigated luminors was studied by the thermal de-excitation method and a connection was established between the attenuation and liberation . I the levels at definite depths. "The authors are grateful to senior designer A. G. Ovchinnikov, radio technicians V. P. Ly\*so. and Yu. A. Platukhin, senior laboratory assistants Z. M. Bruk, S. B. Kondrashkin, N. V. Mitrofanova, L. N. Petrakov, and A. D. Sy\*chkov and laboratory assistant V. P. Prokhorova who helped with the present work." Orig. art. has: 66 figures, 28 formulas, and 4 tables.

Cord 3/4

ACCESSION NR: AT4001250

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ASSOCIATION: Fizicheskiy institut im. P. N. Lebadeva AN SSSR (Physics Institute, AN SSSR)

SUDMITTED: 00 DATE ACQ: 30Nov63 ENCL 00

SUS CODE: PH NO REF SOV: 049 OTHER: 030

L 58305-65 ENT(m)/ENP(t)/ENP(b) IJP(c) JD/JG UR/0368/65/002/002/0115/0125 ACCESSION NR: AP5010039 Levshin, V. L.; Fridman, S. A.; AUTHORS: Chikhacheva, V. Shchayenko, V. V. Rare earth elements as activators of zinc sulfide cathode TITLE: luminors SOURCE: Zhurnal prikladnoy spektroskopii, v. 2, no. 2, 1965, 115-125 TOPIC TAGS: zinc sulfide optical material, cathode luminescence, rare earth activator, transition frequency, integral luminescence yield, emission spectrum This is a continuation of earlier studies (Izv. AN SSSR ABSTRACT: ser. fiz. v. 25, 392, 1961 and others) of the interaction between rare-earth activators and the luminescence centers they produce in luminors based on ZnS and ZnS.CdS. The present study was aimed at a comparison of the properties of rare earth activators in ZnS luminors prepared under controlled conditions and suitable for use as Card

L 58305-65 ACCESSION NR: AP5010039

comparison luminors, in order to ascertain the effect exerted on the composition and on the luminescence yield of variations of the synthesis conditions, luminor composition, and variation of its crystal The rare earth elements used as activators were Ce, Pr, Nd, lattice. Sm, Eu, Tb, Dy, Ho, Er, and Tu. The cathode luminescence spectra were measured either photographically or photoelectrically. The phosphors were excited with an electron beam (10-6 A/cm2 at 20 kV). The luminescent spectra of the phosphors were investigated with an ISP-51 spectrograph. The measurements were made at room temperature. The results are illustrated in Table 1 of the Enclosure, which shows that the individual rare earth elements have greatly varying activation efficiency. A study was also made of the variation of the emission spectra with change in the CdS composition, using ZnS.CdS-Ho as The results conclude earlier conclusions that the transan example. ition frequencies in the centers of rare earth elements are independent of the CdS content and of the average lattice constant, at least for crystals of the ZnS type. The CdS content affects only the integral emission of the phosphor. Original article has: 6 figures and 2 tables

Cord 2/4

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ASSOCIATION:	None					
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	i	Cc4+	7500	8040	Tb3+	64			
•		Pr <sup>s+</sup> Nd <sup>s+</sup>	864 870	312	Dy <sup>g+</sup> Ho <sup>g+</sup>	600	•		
		Sm <sup>34</sup>	1800	1800	Er <sup>4+</sup>	22 222	24 		
	; ;	Eu <sup>4+</sup>	444	858	Tu <sup>\$4</sup>	7200	16400		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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TAND(1)/EWR(c)/EWP(t)/EWP(b) 5/0048/65/029/003/0500/0502 ACCESSION NR: AP5009532 AUTHOR: Lovshin, V.L.; Fridman, S.A.; Chikhacheva, V.A.; Shchayenko, V.V. TITLE: Investigation of the cathodoluminescence of rare earth activated zinc sulfide and zinc-endmium sulfide luminophors Report, 12th Conference on Luminescence held in L'vov 30 Jan-5 Feb 19647 SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 3, 1965, 500-502 TOPIC TAGS: cathodoluminescence, zinc compound, sulfur compound, rare earth element, cadmium compound ABSTRACT: The cathodoluminescence spectra were investigated for ZnS luminophors activated with each of the rare earths except Fm, and for ZnS-CdS mixtures activated with Ho. The luminophors were prepared at 12000 in an HgS or an EH3 atmosphere, and contained 0.01 percent activator by weight. The cathodoluwinescence was excited by a 10-6 A/cm2 beam of 20 keV electrons. The experimental technique has been described elsewhere (V.L.Levshin, E.Ya.Arapova, A.I.Vhazhevich, et al., Tr.Fiz. In-ta im. P.N.Lebedeva AN SSSR, 23, 83 (1963)). All but three of the rare earth activators resulted in cathodoluminescence in the visible region. The principal emission bands of each of the satorial are tabulated. The different Card 1/2

dopants can be used to obtain luminescence in narrow spectral regions in the green, yellow, or red. The decay of the luminescence was found to be complex and rapid. Curves are presented for four of the luminophors; for these the luminescence intensity decayed to 1% of its initial value in from 1 to 10 millisec. The luminophors prepared in an INI3 atmosphere exhibited some luminescence lines not present in those prepared in H28; they were also some 20% brighter and had sharper emission

band edges than the materials perpared in H2S. The addition of CdS to EnS:Ho luminophors altered the relative intensities of the several luminescence bands but dld not introduce any new ones. The cathodoluminescence intensity was maximum for 15% CdS, and a second smaller maximum (due principally to emission in the red) occurred at 48% CdS. Orig. art. has: 1 figure and 2 tables.

occurred at 48% CMS. Orig. art. has: 1 figure and 2 tables

ASSOCIATION: None

SUBMITTED: 00 SUB CODE: OP, SS

NR REF SOV: 002 OTHER: 000

Cord 3/2

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L 26497-66 EWT(1)/E#T(m)/EWP(t) IJP	(c) RM/JD
ACC NRI APG013055	SOURCE CODE: UR/0048/66/030/004/0573/0580
AUTHOR: Arapova, E. Ya.; Levshin, V.L.; M. Fridman, S.A.; Shchayenko, V.V.	itrofanova, N.V.; Reshetina, T.S.; Tunitskaya, V.F.;
OPG Physical Institute in D. V. Lehaler	: X
institut, Akadeniya nauk, SSSR)	v, Academy of Sciences SSSR (Fizicheskiy
	$\mathcal{N}$
TITLE: Luminescence mechanism and the Fourteenth Conference on Luminescence he	band system of ZnS;Fe luminophors /Report, eld in Riga, 16-23 September 1965/
SOURCE: AN SSSR. Izvestiya. Seriya fiz	icheskaya, v. 30, no. 4, 1966, 573-580
TOPIC TAGS: crystal phosphor, luminesce IR sensor	ence, zinc sulfide, thermoluminescence,
the nature of their luminescence mechanisynthesis procedure for ZnS:Fe phosphors initial ZnS, containing less than $10^{-7}$ Fe (none to 3 x $10^{-4}$ g/g) and heated at the powdered and sublimated specimens procedure for has one luminescence band peaking at band peaking at 630 m $\mu$ ; the intensity of	sulfide phosphors have been known since 1945, ism is still obscure. The writers developed a s in both powdered and sublimate form. The g/g iron, was mixed with the desired amount of 1200° C for 90 min in a stream of HCl. Both roved to be sensitive to infrared. ZnS without 450 mµ; doping with Fe gives rise to another if this red band increases with the dopant conty weakens. Figures in the text show the lumin-
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i. 26497-60 ACC NRi APG013055 escence spectra at different Fe concentrations and the dependences of the intensities of the blue and red bands on the Fe content. Glow curves for the blue and red regions are also shown. Evaluations are made of the trap depth. The glow curve data are consistent with the results obtained in observing IR-stimulated flashes. A band scheme with two levels near the bottom of the conduction band and two levels or groups of levels near the valence band is proposed. Data on the infrared response are presented and discussed. It is suggested that the trapping levels responsible for IR-stimulated light flash may differ from the trapping levels responsible for the thermostimulated peak at 155°, even though both sets of levels are located at about the same depth, (0.06-0.07 eV). Aside from stimulation, infrared also proved to have a quenching effect, particularly in a certain frequency range. The authors are grateful to Z. M. Bruk, V. A. Minayeva and T. F. Filin for assistance in the work. Orig. art. has 9 figures. ORIG REF: 008/ OTH REF: 002 SUBM DATE: 00/ SUB CODE: 20/

ACC NR: AP7004983 (A) SOURCE CODE: UR/0048/66/030/009/1494/1499

AUTHOR: Levshin, V.L.; Fridman, S.A.: Chikhacheva, V.A.; Shchayenko, V.V.

ORG: none

TITLE: Investigation of the energy transfer from a ZnS host lattice to a rare earth activator /Report, Fourteenth All-Union Conference on Luminescence (Crystal Phosphors) held at Riga, 16-23 Sept. 19657

SOURCE: AN SSSR. Izvestiyal Seriya fizicheskaya, v. 30, no.9, 1966, 1494-1499

TOPIC TAGS: luminoscence, zinc sulfide, rare earth element, luminoscence center, luminoscence quenching, luminoscence spectrum

ABSTRACT: The authors investigated the luminescence of unactivated, holmium-activated and samarium-activated ZnS phosphors containing high and low concentrations of the blue luminescence centers in order to elucidate the role of the blue centers in the excitation of rare earth activator centers in ZnS phosphors, and in particular, to determine whether the extreme view that the rare earth centers can be excited only through the mediacy of the blue luminescence centers is tenable. Specimens with different concentrations of the blue centers were obtained by heating the specimens for different times in a stream of NH<sub>3</sub>. Holmium and samarium were chosen for the study because it had previously been found that the hole level in excited Sm<sup>3+</sup> centers

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ACC NR: AP7004983

lies somewhat above the level of the blue centers and the hole levels in the Ho3+ centers are very low and close to the valence band. The results of the present work were consistent with these earlier findings. The luminescence spectra of the different specimens were recorded at - 180° and + 20° C. From the differences in the intensities of the different luminpscence bands from the different specimens it was possible to draw the following conclusions: 1) rare earth activators in ZnS phosphors are coupled directly to the lattice and usually receive energy from the lattice by electron-hole processes; 2) the blue luminescence centers can mediate the transfer of energy to the rare earth ions, but their presence is not necessary for the excitation of the rare earth ions; 3) the significance of the blue luminescence centers in the excitation of a rare earth activator depends strongly on the nature of the particular rare earth activator; 4) a rare earth activator that has appropriate electron levels can strongly quench the ultraviolet luminescence of unactivated ZnS; and 5) at certain temperatures and with appropriately disposed energy levels there can occur resonant transfer of energy from the ultraviolet and blue luminescence centers to rare earth ions, but this process is not the only or even the main mechanism for excitation of a rare earth ion in the ZnS lattice. Orig. art. has: 3 figures and 1 table.

SUB CODE: 20 SUBM DATE: none ORIG. REF: 008

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ACC NR: AP7004984

luminescence. The relative intensities of the three main thulium luminescence bands varied with variations in the wavelength of the stimulating radiation and in the duration of the H<sub>2</sub>S treatment; from this it is concluded that there are two different kinds of thulium luminescence centers. By breaking a crystal that had been heated in H<sub>2</sub>S for 1.5 hour it was found that uniform activation of the 0.5 mm thick crystal had been achieved. Single crystal ZnS:Tm phosphors were also produced by heating ZnS single crystals in the mixture that is usually employed for preparing ZnS:Tm powder phosphors. The luminescence spectrum of these crystals was practically identical with that of ZnS:Tm powder phosphors. Orig. art. has: 3 figures and 1 table.

SUB CODE: 20 SUBM DATE: none ORIG, REF: 002

Card 2/2

ALEKSEYEV, S.P., prof.; FRIDMAN, S.A., red.

[Controlling factory noise in industrial enterprises; a correspondence seminar] Bor'ba a proizvodatvennym shumom na promyshlennykh predpriiatiiakh; zaochnyi seminar. Kiev, Lektsiia 3. 1963. 50 p. (MIRA 17:10)

1. Kiyevskiy dom nauchno-tekhnichoskoy propagandy.

DASHKOVSKIY, A.F., kand. tekhn. nauk; DLIN, F.S.; FRIDMAN, S.A., red.

[Correspondence seminar "Intensification of the processes of lumber drying"] Zaochnyi seminar "Intensifikatsiia protsessov sushki drevesiny." Kiev. Lektsiia 9. 1963. 57p.

(MIRA 17:9)

1. Kiyevskiy dom nauchno-tekhnicheskoy propagandy.

TARUMOV, A.N., inzh.; FRIDMAN, S.A., inzh.

Experience in studying electrical loads. Prom.energ. 18 no.4: (MIRA 16:4)

(Electric power distribution)

LYUDKOVSKAYA, M.A.; FRIDMAN, S.D.; KLEVKE, V.A.

Removal of carbon dioxide from gases by means of a "hot" potash solution. Khim. prom. 41 no.5:339-343 My '65. (MIRA 18:6)

1. Gosudarstvennyy nauchno-issledovatel skiy i proyektnyy institut azotnoy promyshlennosti i produktov organicheskogo sinteza.

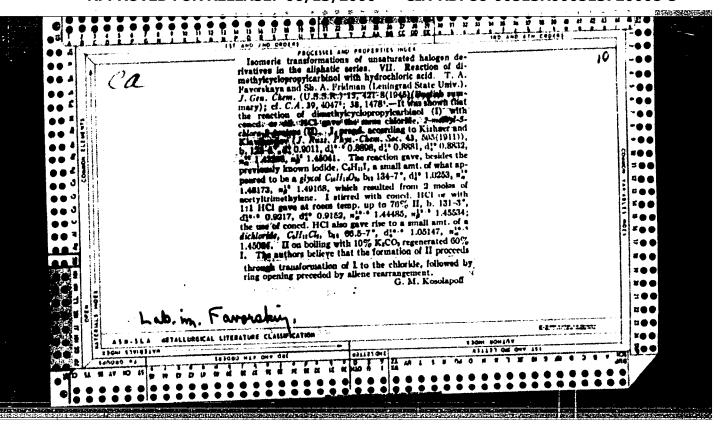
#### FRIDMAN, Sh.A.

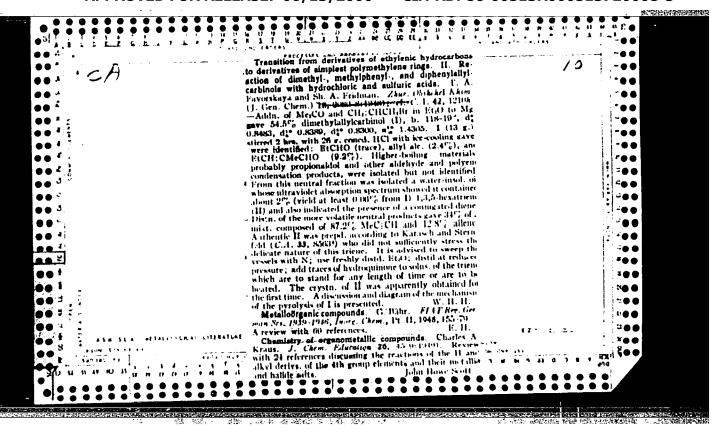
Peritoneal manifestations in diabetes mellitus patients. Zdrav. Belcr. 6 no.2:67-68 F '60. (MIRA 13:6)

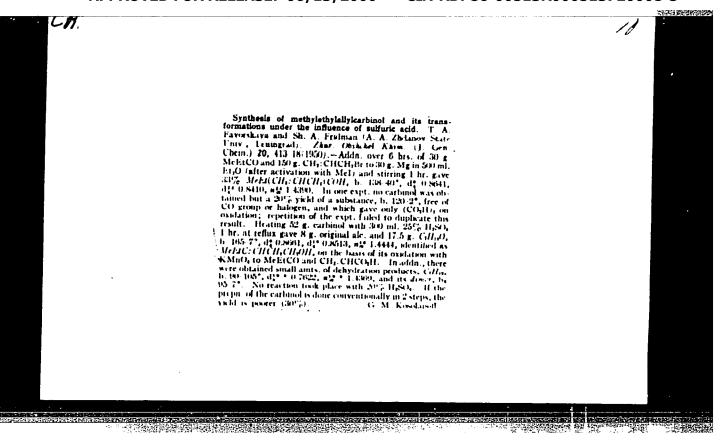
1. Iz endokrinologicheskogo otdeleniya (nauchnyy rukovoditel! - kand.med.nauk N.M. Drasnin) l-y klinicheskoy bol!nitsy g. Minska (glavnyy vrach A.I. Shuba).

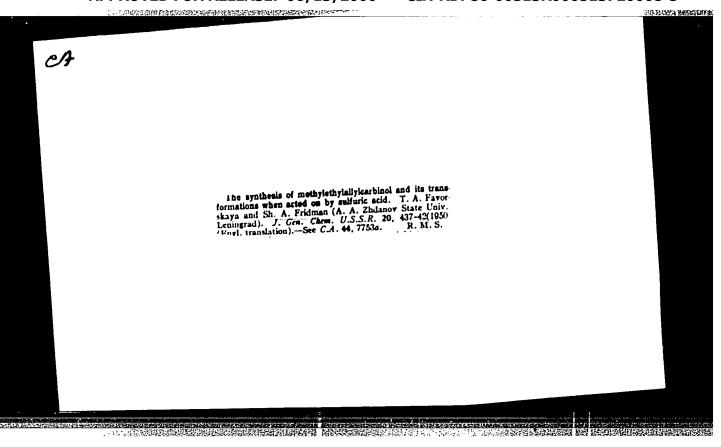
(ABDOMEN) (DIABETES)

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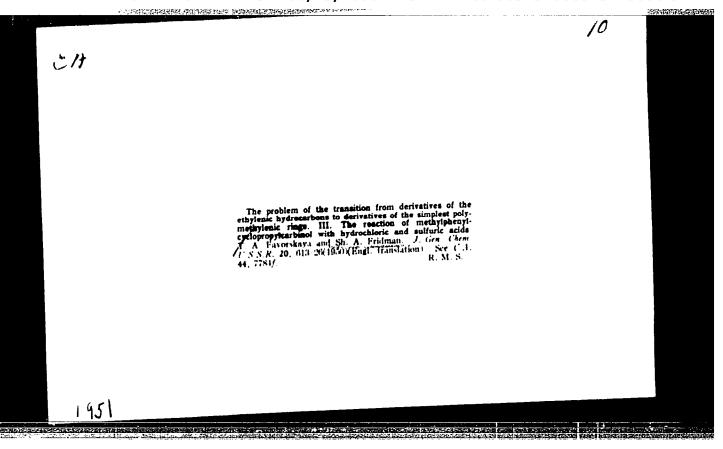
Transition from the derivatives of ethylenic hydrocarbons to the derivatives of the simplest polymethylene cycles III. Reaction of methylphenylcyclopropylcarbinol with hydrochloric and sulfuric acids 1 A loverskaya and Sh. A. Fridman (A. A. Jislamov State Univ. Alemingrad). Zhur Obishel Khom (I. Gen Chem.) 20, it emigrad). Zhur Obishel Khom (I. Gen Chem.) 20, the migration of the cyclopropylacthylphenylcarbinol (I) leads to ring-ure expansion to 1-methyl-1-phenyl-2-eyelohutanol (II) and deliveliation to 2-phenyl-1, t peniadren (III). It'l gives 2-reactions ring opening to McCPh CHCH,CH,Cl and ring expansion to a 4 C ring. AcCII CH, CH, (32.5 g.) and to a 4 D billional to 10 g. activated Mg (by McI) over

and 188 g. Philit added to 15 g. activated Mg (by Mc1) over 4 hrs. in 1840 gave 185 g. 1, bo. 110 (21), d., 1 (20) over 4 hrs. in 1840 gave 185 g. 1, bo. 110 (21), d., 1 (20) over 4 hrs. in 1840 gave 185 g. 1, bo. 110 (21), d., 1 (20) over 4 (25) (1850) gave 470 g. (15 g.) of a product by 80 101 g. 500 HgS0, c20 min; boding) gave 400 g. of the same substance; this does not have a carbonyl group, is stable to the in Calla and to KMnO, but reacts with Na; a purified sample, d. 10523, d. 10 (1987), m. 2 (15152), on oxidation gave BoOH and (CO<sub>1</sub>H)<sub>2</sub>, while McMgl gave the unchanged product; attempted oxidation with CO<sub>2</sub> gave only a trace of (CO<sub>2</sub>H)<sub>2</sub>; only heating with KMnO, resulted in formation of a solid acid, Colling, in .88°, which on standing in a desirector becomes strupy without change of compile. This acid was not PhMcgCCO<sub>3</sub>H (mixed) and Me mandelate), possibly it was a mixt, of Mo2-PhCCO<sub>3</sub>H and McPhCHCH<sub>4</sub>CO<sub>4</sub>H (m. 37°). The results indicate that the reaction product of I with HSO, was ith KMnO<sub>4</sub>, indicating an admixt, of some III, or possibly with KMnO<sub>4</sub>, indicating an admixt, of some III, or possibly with KMnO<sub>4</sub>, indicating an admixt, of some III, or possibly

**"你我只要是一个不要的人,我们就是一个人的人,我们就是一个人的人,我们就是一个人的人的人,我们就是一个人的人的人,我们就是一个人的人,我们就是一个人的人,我们** 

MENTAL PROPERTY OF THE PROPERT

4-phenyl 1, 1 pentation (IV), since 4 considerable and of resinous matter is formed. If failed to react with 1.1 HeI in the cold in 15 min but coned. HeI give in 3 hrs (id) 5% of a maxt of evels and insaid, absorbes, by 134 of, which could not be sepal by disting in adding their wishlated a small and, of colling by 93.7%, d2 0.9710, a25 (1952), w22.1 5425, giving BOOH and (CORIG), w22.1 5425, giving BOOH and (CORIG) with KMOO, and stouthed as III, probably formed from M. PhCCR HeI HeII. (He hatter could be removed with 1925 7%, d2 10831, d2 10833, w2.1 5395, selentified as 1 methyl 1-phenyl-2-kloresyclobulane, since if was unchanged after 150 hrs. with hot 20% K2CO or 15% Addit, while oxidation with hot KMOO, gave MePhCOH)-CH(OH) COH, in. 85.6% which was also obtained from the unsetd. Cl. drive, valores), as well as BOOH. Freeville chlorule builed with 10% ale. NaOH readily welded IV, which reacted ergonously with makes anhydrale, as well as some of its dimer, obtained only in crude state, by 117–18%.



England of educous substances, derivatives of 3-hydroxy-y-pyranene. Trudy WHISNOV no.6:23-80 (Migt 17:4)

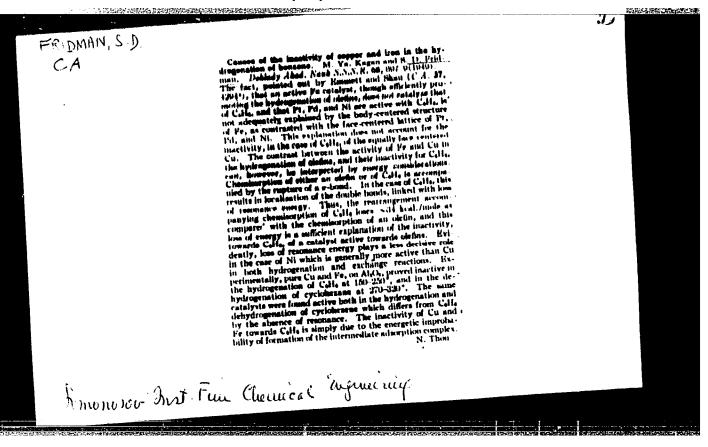
FRIDMAN, S. D.

"Investigation of the Peculiarities of the Catalytic Mydrogenation of Benzene." Thesis for degree of Cand. Chemical Sci. Sub. 28 Feb 49, Moscow Inst. of Fine Chemical Technology imeni M. V. Lomonosov.

Summary 82, 18 Dec 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1949. From Vechernyaya Moskva, Jan-Dec 1949.

### "APPROVED FOR RELEASE: 06/13/2000

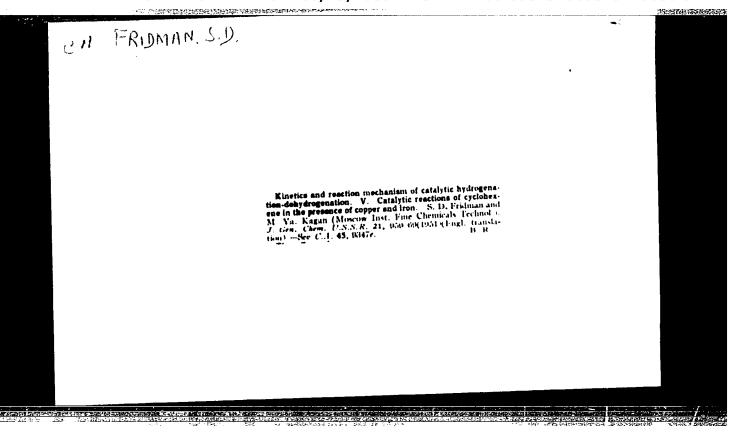
#### CIA-RDP86-00513R000513720008-5

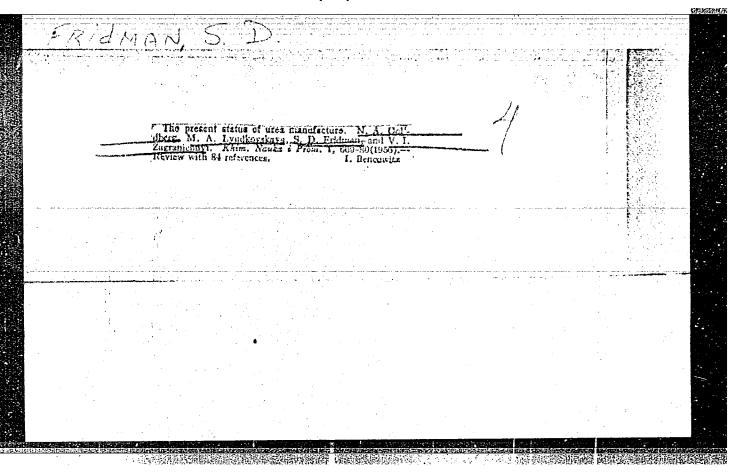


Ca. 10. FRIDMAN, S.D

Einetics and mechanism of catalrtic hydrogenation—depressance of copper and iron. B. D. Fridman and M. Ya. Kagan. (Moscow Inst. Fine Chem.) 71, 874-84(1951); cf. C.A. 45, 4126.—(1) The thermodynamic functions were calct. for the 3 possible reactions of cyclohexene (I). For the hydrogenation I + II, → cyclohexane (II), the heat All = 20800 + 0.38 I + 0.0086 I and, assuming uniform growth of the entropy in the series Calf. → Ca

hydrogenated at 300°. At the const. temp. of 240°, and coust, mean feed rate of 3.0 ml. 1/hr., I is converted to the extent of 100%; with a mole ratio r=4i:11=0.3:1, the extent of 100%; with a mole ratio r=4i:11=0.3:1, the reaction is 93% disproportionation and 7% dehydrogenation, and at a ratio 0.5:1 it is 100% disproportionation. Further increase of the ratio, to r=0.6:1, causes partial hydrogenation, and at r=2.7. I the reaction is 100% hydrogenation. At count, temp.,  $230^\circ$ , and r=0.3:1, the degrees of conversion at the contact times r=10.7 and 23.2 sec. were r=77.5 and 98.3%, resp., and the percentages of disproportionation (dehydrogenation) 93.1 (6.9) and 97.8 (2.2), resp. At the same temp., r=0.5:1, r=11.6 sec., r=0.0.5, resp., and at r=25.7 sec., r=98.05 (exclusively disproportionation). At the same temp., r=0.5:1, r=10.7, r=81.2 (hydrogenation 16.3, disproportionation 88.7%), and at r=23.6, r=90.8 (4.5, 95.5%). The fall of r=10.7, r=10.7, r=10.7, and at the fraction of through hydrogenation and the fraction converted through hydrogenation increases with decreasing r=10.7. Consequently, change of affects the rates of hydrogenation and of dehydrogenation and disproportionation occur simultaneously, the former increasing and the latter decreasing with r affects the rates of hydrogenation and of denyitrogen (and differently. With I dild, with  $N_1:I=1,7:I$ ), without  $II_1$ , dehydrogenation and disproportionation occur simultaneously, the former increasing and the latter decreasing with rising temp. The total amt. of I converted in the presence of  $N_0$  at  $250^\circ$  and r=12 sec. is only  $r=24.31^\circ$  as against 100% under the same conditions with  $10^\circ$ . Analogous effects of the temp., of diln, with  $10^\circ$ , and of variation of r, were observed in the reaction of I on a Fe-Ald), catalyst between 130 and  $130^\circ$ . Neither does Fe catalyze the hydrogenation of Call, or the dehydrogenation of II. (3) Disproportionation of I on Cu and Fe proceeds considerably alower than on Pt, Pd, or Ni. The fact that in  $N_1$  the conversion is so much slower than in  $10^\circ$  indicates the important role of  $10^\circ$  in the conjugated dehydrogenation-hydrogenation which results in the disproportionation. N. Then





5(1),5(4) 507/64-58-7-10/18 Lyudkovskaya, M. A., Candidate of AUTHORS: Technical Sciences, Fridman, S. D., Candidate of Chemical Sciences, Savel'yeva, L. I. Separation of the Mixtures Carbon Dioxide and Ammonia With TITLE: Aqueous Solutions of Monoethanol Amines (Razdeleniye smesey dvuokisi ugleroda i ammiaka vodnymi rastvorami monoetanolamina) Khimicheskaya promyshlennost, 1958, Nr 7, pp 423-429 (USSR) PERIODICAL: V. S. Sveshnikova, M. Ya., Futoryanskaya, A. N., Mukhina, R. Ya., ABSTRACT: Kirindasova and M. D. Mantrova took part in this work. To devise a recirculation scheme of a selective CO2-absorption in aqueous monoethanol amine (MEA) solutions in the (Ref 1) urea synthesis

data on the solubility and solution kinetics of the ammonia - carbon dioxide mixtures must be known. As there are no such data available in publications the authors carried out corresponding experiments. The phase equilibrium in the system MEA-NH<sub>2</sub>-CO<sub>2</sub>-H<sub>2</sub>O was investigated according to the dynamic method. The arrangement and method employed were taken from the paper by D. S. Tsiklis

and method employed were taken from the paper by D. S. Tsiklis and A. N. Kofman (Ref 2). The partial pressure of CO<sub>2</sub> decreases (the solubility increases) with the increase of the NH<sub>3</sub> content

Card 1/3

Separation of the Mixtures Carbon Dioxide and Ammonia SOV/64-58-7-10/18 With Aqueous Solutions of Monoethanol Amines

in the solution. The partial pressure of NHz is a linear function of the CO2-concentration. According to the diagrams the sclution heat of NH3 and CO2 were calculated. As compared to the solubilities in pure water it was found that by the presence of MEA the solubility of CO2 increases and that of NH3 decreases. Under certain conditions the partial pressure of CO2 can drop to zero whereas (under the same conditions) that of NH3 attains considerable values. In a schematically shown arrangement the influence exerted by some factors upon the absorption degree of NHz was investigated. At a complete CO2absorption the absorption degree of NH3 decreases with the increase in temperature, the increase of the MEA concentration, a decrease of the intensity of moistening and an increase of the molar ratio  $NH_3$ :  $CO_2$  in the gas mixture. In the experiments on the NH3 desorption the authors worked with steam besides an inert gas in a column suggested (Figure) by the Dzerzhinskiy filial GIAP (Dzerzhinskiy Branch of the GIAP). The viscosities of the MEA solutions with CO2 and NH3 were determined in a viscosimeter according to Pinkevich. At a constant CO2-content

Card 2/3

Separation of the Mixtures Carbon Dioxide and Ammonia SOV/64-58-7-10/18 With Aqueous Solutions of Monoethanol Amines

the viscosity is practically independent of the NH3-concentration, whereas at a constant NH3-content the viscosity of the solutions increases considerably with the increase of the CO2-concentration. Based on the results obtained a scheme for the separation of NH3 and CO2 from distillation gases according to the urea synthesis is given. There are 14 figures, 4 tables, and 5 references, 3 of which are Soviet.

Card 3/3

Urea-formaldehyde fertilizers. Zhur.prikl.khim. 34 no.10:2206 2216 0 161. (MIRA 14:11) (Urea) (Formaldehyde) (Fertilizers and manures).

FRIDMAN, S.D.; KLEVKE, V.A.; HELYAYEVA, N.N.; KIRINDASOVA, R.Ya.;

SVESHNIKOVA, V.S.; Prinimali uchastiye: AKIMOVA, M.D.;

FUTORYANSKAYA, M.Ya.

Condensation of urea with formaldehyde for the production of fertilizers with slowly assimilable nitrogen. Zhur. prikl. khim. 38 no.5:1091-1097 My '65. (MIRA 18:11)

LISKOVICH, A.L.; FRIDMAN, Sh.D.

Using aerial gamma-ray survey data for geological mapping.
Sov.geol. 1 no.11:3-15 N '58. (MIRA 12:4)

1. Ministerstvo geologii i okhrany nerd SSSR.
(Geology--Maps)

# "APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000513720008-5

KOGAN, R.M. FRIDMAN, Sh.D.

Investigating mixtures of radioactive elements with threshold spectrometers. Izv. AN SSSR. Ser.geofiz. no.6:809-817 Je '60. (MIRA 13:6)

1. Akademiya nauk SSSR. Institut prikladnoy geofisiki. (Radioactive substances-Spectra)

S/049/60/000/004/004/018 E032/E514

AUTHORS:

Kogan, R.M. and Fridman, Sh.D.

TITLE:

The Energy Distribution of Y-Rays in the Atmospheric

Layer Near the Earth's Surface

PERIODICAL:

Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya,

1960, No.4, pp.530-547 (USSR)

The energy distribution of  $\gamma$ -rays in a layer a few TEXT: hundred metres thick and lying immediately above the Earth's surface is calculated. A layered model of the atmosphere is employed in which the concentration of the  $\gamma$  sources and the density of the absorbing medium is a function of z only. The calculation is carried out for source and energy distributions which satisfactorily explain real conditions in the energy range 0.15 to 2.5 MeV. The sources of radiation are taken to be radioactive elements of the uranium and thorium series, and also radioactive potassium distributed uniformly in the upper layers of rocks, orradioactive elements with given γ-ray energy deposited in the form of a thin uniform film on the separation boundary between rocks and the atmosphere. Extensive calculations have been carried out for different numerical values of source and Card 1/2

5/049/60/000/004/004/018 E032/E514

The Energy Distribution of  $\gamma$ -Rays in the Atmospheric Layer Near the Earth's Surface

absorption parameters and these are summarized in eleven graphs and seven tables. An estimate is also made of the effect of the form of the  $\gamma$  field on isotropic  $\gamma\text{--ray}$  detectors. There are 11 figures and 7 tables and 9 references: 7 Soviet and 2 English.

Akademiya nauk SSSR Institut prikladnoy geofiziki ASSOCIATION: (Academy of Sciences USSR, Institute of Applied

Geophysics)

SUBMITTED: June 19, 1959

Card 2/2

roc	Studies on the spectral composition of gamma radiation emitted by rocks in their natural location. Izv. AN SSSR. Ser. geofis. no.8: 1187-1197 Ag *60. (MIRA 13:8)  1. Akademiya nauk SSSR. Institut fisiki Zemli. (Gamma rays) (Prospecting—Geophysical methods)					
l.						
		<i>:</i>		•		

BALYASNYY, N.D.; KOGAN, R.M.; NIKIFOROV, M.V.; RENNE, O.S.; FRIDMAN, Sh.D.

Radioisotopic analysis of rocks and soils from the energy spectrum of gamma rays in the troposphere. Dokl. AN SSSR 140 no.4:807-810

0 '61.

(MIRA 14:9)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720008-5"

KOGAN, R.M.; NIKIFOROV, M.V.; FRIDMAN, Sh.D.

Determining the potassium content in soils by gamma rays. Pochvovedenie no.8:92-98 Ag \*61. (MIRA 14:11)

1. Institut prikladnoy geofiziki AN SSSR. (Feils-Potassium content)

BALYASNYY, N.D.; KOGAN, R.M.; REMEE, O.S.; FRIDMAN, Sh.D.

Experience in determining RaC', Thd' and K<sup>40</sup> in homogenous granitoids from the energy composition of J-rays. Izv. AN SSSR. Ser.geofiz. no.5:664-676 My '62. (MIRA 15:8)

1. Institut prikladncy geofiziki AN SSSR. (Radioisotopes) (Gamma rays)

IZRAEL, Yu.A.; - KOCAN, R.M.; FRIDMAN, Sh.D.

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